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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary

Application No.

10/590,923

Applicant(s)

TANG, JIE

Examiner

ADNAN BAIG

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-34 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 5/12/2008, 10/10/2006
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Inventor's Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 32, lines 7-8, the meaning of the phrase "said management server a corresponding software update package ..." is unclear. It appears that some word is missing between "server" and "a corresponding software update package." In addition, in line 8, "said first terminal" lacks proper antecedent basis.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 7, 15-21, 23, 26-29, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et al. (US 2005/0102662) in view of Rao (US 2004/0123282).

Regarding Claim 1, Samsalovic discloses a method of reporting terminal information, comprising the following steps:

reporting, by a terminal device (**Client 12, Fig. 1**), terminal information through a software program interface (**paragraph [0014] lines 5-14**) provided by a Device Management (DM) Agent module (**see updatable component in device in Para, [0008]**);

forwarding, by said DM Agent module, said terminal information to a DM Server (**Referring to Fig. 1, Samsalovic illustrates a client 12 (terminal device) with updatable component, is able to communicate device information to a server (item 14), see Para [0008]**).

reporting, by said DM Server, said terminal information to a Maintenance Unit (MU), (**In regards to applicants disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (maintenance unit) coupled to server 34 which maintains the terminal device using a dynamically linked library, see paragraphs [0017] & [0020] lines 1-16**).

(Samsalovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (**e.g., return to service center**), **See paragraphs [0002-0005]**).

Samsolovic does not expressly disclose the terminal device reporting the terminal information to the (DM) Agent Module directly. However the limitation is known in the art of communications.

(Rao discloses a terminal device reporting (**Fig. 1, Item 115**), the terminal information to a (DM) Module Agent directly (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to report terminal information through a software program by a Device Agent Module; forwarding, by said DM agent module, said terminal information to a DM server, and reporting, by said DM server, said terminal information to a maintenance unit (MU) as taught by Samsolovic, by using a terminal device to report the terminal information to a DM agent module directly as taught by Rao, to receive software updates in the device for user convenience and quality of service.

Regarding Claim 2, the combination of Samsolovic in view of Rao disclose the method as in claim 1, wherein said software program interface comprises a messaging interface, a file interface, an API, or a Web service interface, **(See paragraph [0052] (e.g., API). The server communicates the devices information e.g., update, through messages (control interface) between the server and updater 32 of Fig. 3, see paragraph [0039]).**

Regarding Claim 3, the combination of Samsolovic in view of Rao discloses the method as in claim 2, wherein said messaging interface comprises an XML interface or a network protocol interface, **(Referring to Fig. 4, Samsolovic illustrates an XML interface at step 2, see paragraphs [0015] & [0040]).**

Regarding Claim 4, the combination of Samsolovic in view of Rao discloses the method as in claim 2, wherein when said software program interface employs the API **(paragraph [0052]),** the terminal information is combined into an XML format and is transmitted to the API as an argument, **(see Fig. 4 step 2) & paragraph [0040]).**

Regarding Claim 7, the combination of Samsolovic in view of Rao, discloses the method as of claim 1, wherein said terminal information comprises error information created during the operation of the terminal software **(see Para [0024] & [0026], Rao),** error information created by the terminal hardware, and process information created during

the operation of the terminal, **(Referring to Fig. 5, when XML software is deployed in table 1, error information is created, see paragraph [0078]).**

(Samsolovic teaches error information in a software program where an update is not able to be provided, (e.g., background), paragraph [0004]),

Regarding Claim 15, Samsolovic discloses a Device Management (DM) system, comprising a DM Server (**Fig. 1, Server14**) adapted to manage a terminal device (**Fig. 1, client 12**),

a DM Agent module located in the terminal device (**see updatable component in paragraph [0008]**) and interacting with said DM Server; **(Referring to Fig. 1, Samsalovic illustrates a client 12 (terminal device) interacting device information to a server (item 24) which manages the device, see paragraph [0008]).**

said Device Management system further comprising a Maintenance Unit (MU) coupled to said DM Server and adapted to acquire, store, and maintain the information of the terminal device, **Referring to Fig. 3, Samsalovic illustrates updater 32 (maintenance unit) coupled to server 34 which maintains the terminal device using a dynamically linked library, see paragraphs [0017] & [0020] lines 1-16).**

said DM Agent modules and said DM Server have a software program interface respectively, **(see paragraph [0008] & [0014] lines 11-16).**

the software program interface of said DM Agent module is adapted to receive the terminal information reported from the terminal device and forward the terminal

information to the DM Server (**see paragraph [0008]**) said DM Server reports said terminal information to said MU, **see paragraph [0020] lines 7-10**.

Samsolovic does not expressly disclose the software program interface of said DM agent module is adapted to receive the terminal information reported from the terminal device directly. However the limitation is known in the art of communications.

(Rao discloses a terminal device (**Fig. 1, Item 115**) reporting the terminal information to a (DM) Module Agent directly (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to include the system as taught by Samsolovic, by using a terminal device to report the terminal information to the software program interface of said DM agent module directly as taught by Rao, to receive software updates in the device for user convenience and quality of service.

Regarding Claim 16, the combination of Samsolovic in view of Rao, discloses the DM system as in claim 15, wherein said software program interface comprises a messaging interface, a file interface, an API, or a Web service interface, (**see Samsolovic, Para [0052]**).

Regarding Claim 17, Samsolovic discloses a system for reporting terminal information applied to a communication network, the system comprising:

a first terminal client (**Client 12, Fig. 1**) accessing said communication network (**Fig. 1 item 16**), (**see Para [0020] lines 10-13**).

a management unit arranged in said first terminal, configured to receive the information of said first terminal reported by said first terminal, (**see updatable component in device in Para [0008]**).

a management server (**Fig. 1, Item 14**), configured to receive the information sent by said management unit, (**see paragraph [0008]**).

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (**e.g., return to service center**), **See paragraphs [0002-0005]**).

Samsolovic does not expressly disclose a first terminal configured to communicate with a second terminal accessing the network.

Samsolovic does not expressly disclose the first terminal device reporting the terminal information to the Management Unit directly. However the limitation is known in the art of communications.

(Rao discloses electronic devices such as mobile phones receive software updates which would be obvious that a second terminal (i.e., **another mobile phone**) can be configured to communicate with the first terminal, **see Para [0005]**).

(Rao discloses a first terminal device reporting (**Fig. 1, Item 115**), the terminal information to a Management Unit directly (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to include a management unit arranged in said first terminal accessing a communications network, and a management server, configured to receive the information sent by said management unit as taught by Samsolovic, by using a first

terminal device being configured to communicate with a second terminal device, to report the terminal information to a management unit directly as taught by Rao, to receive software updates in the device for user convenience and quality of service.

Regarding Claim 18, the combination of Samsolovic in view of Rao discloses the system as in claim 17, wherein the information of said first terminal is reported to said management unit via a software program interface, **(see Samsolovic, Para [0014] lines 5-16 & Rao, Para [0025]).**

said software program interface comprises a messaging interface, a file interface, an API, or a Web service interface, **(see Samsolovic, paragraph [0052]).**

Regarding Claim 19, the combination of Samsolovic in view of Rao discloses the system as in claim 18, wherein said messaging interface comprises an XML interface or a network protocol interface. **(Referring to Fig. 4, Samsolovic illustrates an XML interface at step 2, see paragraphs [0015] & [0040]).**

Regarding Claim 20, the combination of Samsolovic in view of Rao discloses the system as in claim 18, wherein when said software program interface employs said API **(Samsolovic, Para [0052])**, the information of the said first terminal is combined into an XML format and is reported to said API as an argument, **(see Samsolovic, Fig. 4 step 2 & paragraph [0040]).**

Regarding Claim 23, Samsolovic discloses a system for maintaining terminal device applied to a communication network, the system comprising:

a first terminal (**Client 12, Fig.1**) accessing said communication network (**Item 16, Fig. 1**), (**see Para [0020] lines 10-13**).

a management unit (**see updatable component in device in Para [0008]**) arranged in said first terminal, configured to receive the error information (**See fig. 5, Table 1**) of said first terminal.

(Samsolovic teaches error information in a software program where an update is not able to be provided, (**e.g., background**), **paragraph [0004]**),

a management server, configured to receive the error information sent by said management unit; (**see paragraph [0008]**)

a maintenance unit, configured to receive the error information of said first terminal sent by said management server and send a corresponding software update package for maintaining said first terminal to said management server. (**In regards to applicants disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (maintenance unit) coupled to server 34 which provides software updates to the terminal device using a dynamically linked library, see paragraphs [0017] & [0020].**)

Samsolovic does not expressly disclose a first terminal configured to communicate with a second terminal accessing said communications network.

Samsolovic does not expressly disclose the first terminal device reporting the error information to the Management Unit directly. However the limitation is known in the art of communications.

(Rao discloses electronic devices such as mobile phones receive software updates which would be obvious that a second terminal (**i.e., another mobile phone**) can be configured to communicate with the first terminal, **see Para [0005]**).

(Rao discloses a first terminal device reporting (**Fig. 1, Item 115**), the error information (**see Para [0024]**) to a Management Unit directly (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to include a management unit arranged in said first terminal accessing a communications network, and a management server, configured to receive the error

information sent by said management unit, and a maintenance unit, configured to receive the error information of said first terminal sent by said management server to send a software update package as taught by Samsolovic, by using a first terminal configured to communicate with a second terminal, to report the error information to a management unit directly as taught by Rao, to receive software updates in the device for user convenience and quality of service.

Regarding claim 26, Samsolovic discloses a method of reporting terminal information applied to a communication network, the method comprising:

reporting, by a terminal (**Client 12, Fig. 1**) accessing said communication network (**Item 16, Fig. 1**), the information of the terminal to a management unit; (**See updatable component in Para [0008]**).

upon receiving the information of the terminal, the management unit sending the information to a management server. (**Referring to Fig. 1, the updatable component (management unit) transmits terminal information to a server, see paragraph [0008]**).

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (**e.g., return to service center**), **See paragraphs [0002-0005]**).

Samsolovic does not expressly disclose the terminal reporting the terminal information to the management unit directly. However the limitation is known in the art of communications.

(Rao discloses a terminal device reporting (**Fig. 1, Item 115**), the terminal information to a management directly (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, for a management server to receive terminal information from a management unit accessing a communications network as taught by Samsolovic, by using a terminal device to report the terminal information to a management unit directly as taught by Rao, to receive software updates in the device for user convenience and quality of service.

Regarding Claim 27, the combination of Samsolovic in view of Rao discloses the method as in claim 26, wherein the information of said terminal is reported to said

management unit via a software program interface; **(see Samsolovic, Para [0014] lines 5-16).**

said software program interface comprises a messaging interface, a file interface, an API, or a Web service interface, **(see Samsolovic, Para [0052]).**

Regarding Claim 28, the combination of Samsolovic in view of Rao discloses the method as in claim 27, wherein said messaging interface comprises an XML interface or a network protocol interface. **(Referring to Fig. 4, Samsolovic illustrates an XML interface at step 2, see paragraphs [0015] & [0040]).**

Regarding Claim 29, the combination of Samsolovic in view of Rao discloses the method as in claim 27, wherein when said software program interface employs said API **(Samsolovic, Para [0052])**, said terminal information is combined into an XML format and is reported to said API as an argument, **(see Samsolovic, Fig. 4 step 2 & paragraph [0040]).**

Regarding Claim 32, Samsolovic discloses a method for maintaining terminal device applied to a communication network, the method comprising:

sending, by a terminal (**see Client 12, Fig. 1**) accessing said communication network (**Item 16, Fig. 1**), the information of the terminal to a management unit, (**See updatable component in Para [0008]**).

Upon receiving the information of the terminal, the management unit sending the information to a management server; (**Referring to Fig. 1, the updatable component (management unit) located in client device 12 transmits terminal information to a server, see Para [0008]**).

upon receiving the information of the terminal, said management server a corresponding software update package for maintaining said first terminal to said management server, (**see Para [0021] lines 6-15**).

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (**e.g., return to service center**), **See paragraphs [0002-0005]**).

Samsolovic does not expressly disclose the terminal sending the terminal information to a management unit directly. However the limitation is known in the art of communications.

(Rao discloses a terminal device sending (**Fig. 1, Item 115**), the terminal information to a management unit (**Fig. 1, Item 117**), where the bootstrap 115 located in the mobile

device 107, sends control information to update agent 117 (**management unit**) when a software update is needed, **see Para [0025] lines 1-9**).

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, for a management server to send a software update package upon receiving terminal information sent from a management unit accessing a communications network as taught by Samsolovic, by using a terminal to report the terminal information to a managements unit directly as taught by Rao, to receive software updates in the terminal for user convenience and quality of service.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et. al (US 2005/0102662) in view of Rao (2004/0123282) as applied to claim 1 above, and further in view of Chatrath US (2005/0060361).

Regarding Claim 5, the combination of Samsalovic in view of Rao discloses the method of claim 1 wherein said DM Agent module transmits said terminal information.

forwarding, by said DM Agent module, said terminal information to a DM Server (Referring to Fig. 1, Samsalovic illustrates a client 12 (**terminal device**) with an

updatable component is able to transmit device information to a server (**item 14**), **see Para [0008]**).

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005]**).

The combination of Samsolovic in view of Rao does not disclose the DM agent module transmitting said terminal information via an extended open mobile alliance protocol. However the limitation is known in the art of communications.

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement the method of claim 1 where a DM Agent module transmits said terminal information to a DM server as taught by the combination Samsolovic in view of

Rao, by using an extended Open Mobile Alliance DM protocol as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 6, the combination of Samsolovic in view of Rao, and further in view of Chatrath disclose the method as in claim 5, wherein the transmission of said terminal information by said DM Agent module is implemented:

with a command of the extend OMA DM protocol which supports active event triggered by clients;

or by said DM Agent module is implemented by extending a standard command of the OMA DM protocol into a terminal information reporting command;

or by adding a special terminal information reporting command into the OMA DM protocol;

or with a command of the OMA DM protocol directly, **(Referring to Fig. 2, Chatrath illustrates a management session message (command) transmitted to a management server at step 209 using the OMA DM protocol, see paragraph [0027] lines 18-22).**

6. Claim 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et. al (US 2005/0102662) in view of Rao (2004/0123282) and further in view of Chatrath US (2005/0060361).

Regarding Claim 8, Samsolovic discloses a method for maintaining terminal device, comprising the following steps:

reporting, by a terminal device (**Client 12, Fig. 1**), terminal information through a software program interface (**paragraph [0014] lines 5-14**) provided by a Device Management (DM) Agent module (**see updatable component in device in Para [0008]**)

forwarding, by said DM Agent module, said terminal information to a DM Server; (**Referring to Fig. 1, Samsalovic illustrates a client 12 (terminal device) with updatable component is able to communicate device information to a server (item 14), see Para [0008]**).

reporting, by said DM Server, said terminal information to a Maintenance Unit (MU); (**In regards to applicants disclosure in paragraph [0040], the maintenance unit is coupled to the DM server and is adapted to acquire, store, and maintain the information of the terminal device. Referring to Fig. 3, Samsalovic illustrates updater 32 (maintenance unit) coupled to server 34 which maintains the terminal device using a dynamically linked library, see paragraphs [0017] & [0020] lines 1-16**).

upon receiving said terminal information, determining, by said MU, the corresponding software update package and sending said software update package to the DM Server, **(see paragraph [0020] lines 7-13)**

maintaining, by said DM Server, the terminal device with said software update package, **(see paragraph [0021] lines 6-15)**

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005]**).

Samsolovic does not expressly disclose the terminal device reporting the terminal information to the (DM) Agent Module directly. However the limitation is known in the art of communications.

Samsolovic does not expressly disclose maintaining, by said DM server, the terminal device with said software update package following an OMA DM process. However the limitation is known in the art of communications.

(Rao discloses a terminal device reporting **(Fig. 1, Item 115)**, the terminal information to a (DM) Module Agent directly **(Fig. 1, Item 117)**, where the bootstrap 115 located in the

mobile device 107, sends control information to update agent 117 when a software update is needed, **see Para [0025] lines 1-9).**

(Rao teaches that software updates are needed in the instance of "errors" or "bugs", **see Para [0005-0006]).**

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to report terminal information through a software program by a Device Agent Module; forwarding, by said DM agent module, said terminal information to a DM server, and reporting, by said DM server, said terminal information to a maintenance unit (MU) as taught by Samsolovic, by using a terminal device to report the terminal information to a DM agent module directly as taught by Rao, to receive software updates in the device for user convenience and quality of service.

(Chatrath teaches a terminal is able to communicate terminal information with a server, using an OMA DM process, **see Fig. 4 steps 404-407 & paragraph [0027]).**

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]).**

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to maintain, by said DM server, the terminal device with said software update package as taught by Samsolovic, following an OMA DM process as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 9, the combination of Samsolovic in view of Rao, further in view of chatrath disclose the method as in claim 8, before the step of reporting by said DM Server said terminal information to a Maintenance Unit (MU), said method further comprising:

upon receiving said terminal information, judging, by said DM Server, whether the terminal device can be maintained automatically, **(Referring to Fig. 2, Samsolovic illustrates client 12 (terminal device) being able to contact the parent server 14 first to determine the latest update information (maintained automatically), see paragraph [0021] lines 6-15).**

if the judgment is "Yes", maintaining, by said DM Server, the terminal device directly following the OMA DM **(Chatrath paragraph [0027])** process; **(Referring to Fig. 2, Samsolovic illustrates that any of the servers other than the Parent server 14 can provide update information to the client 12 (device) when needed, see paragraph [0016] lines 3-14).**

otherwise the method proceeds to the step of reporting by said DM Server said terminal information to a Maintenance Unit (MU) and the subsequent steps of the reporting step,

(Referring to Fig. 3, Samsolovic illustrates that the updater 32 (Maintenance unit) is not at contact at times with the Central server 34 and is told when an update is needed through a command message sent from the server, see paragraph [0039]).

Regarding Claim 10, the combination of Samsolovic in view of Rao, further in view of Chatrath, disclose the method as in claim 8, wherein said software program interface comprises a network protocol interface, an XML interface, or an API, **(see paragraph [0052], Samsolovic)**

Regarding Claim 11, the combination of Samsolovic in view of Rao, further in view of Chatrath disclose the method as in claim 10, wherein when said software program interface employs the API **(Samsolovic, paragraph [0052])**, terminal device program will combine the terminal information into an XML format and send the combined terminal information to the API as an argument **(see Samsolovic, Fig. 4 step 2) & paragraph [0040])**.

Regarding Claim 12, the combination of Samsolovic in view of Rao, further in view of Chatrath, disclose the method as in claim 8, wherein said DM Agent module transmits said terminal information via an extended OMA DM protocol. **(Chatrath teaches a terminal is able to communicate terminal information with a server, via an**

extended open mobile alliance protocol, see Fig. 4 steps 404-407 & paragraph [0027]).

Regarding Claim 13 the combination of Samsolovic in view of Rao, further in view of Chatrath, disclose the method as in claim 12, wherein the transmission of said terminal information by said DM Agent module is implemented:

with commands supporting active event triggered by clients in the extend OMA DM protocol; or

by extending a standard command of OMA DM protocol into a terminal information reporting command; or

by adding a special terminal information reporting command into the OMA DM protocol; or

with a command of the OMA DM protocol directly. **(Referring to Fig. 2, Chatrath illustrates a management session message (command) transmitted to a management server at step 209 using the OMA DM protocol, see paragraph [0027] lines 18-22).**

Regarding Claim 14, the combination of Samsolovic in view of Rao, further in view of Chatrath disclose the method as in claim 8, wherein said terminal information comprises error information created during operation of the terminal software **(see Para [0024] &**

[0026], Rao), error information created by terminal hardware, and process information created during operation of the terminal. **(Referring to Fig. 5, when XML software is deployed in table 1, error information is created, see paragraph [0078]).**

(Samsolovic teaches error information in a software program where an update is not able to be provided, (e.g., background), paragraph [0004])

7. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et. al (US 2005/0102662) in view of Rao (2004/0123282) as applied to claim 17 above, and further in view of Chatrath US (2005/0060361).

Regarding Claim 21, the combination of Samsolovic in view of Rao discloses the system as in claim 17, wherein said management unit sends the information of said first terminal to said management server **see paragraph [0008].**

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005].**

The combination of Samsolovic in view of Rao does not expressly disclose sending the information of said first terminal to said management server via an extended Open Mobile Alliance DM (OMA DM) protocol. However the limitation is known in the art of communications.

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol DM, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, paragraph [0003]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement the system of claim 17 where sending the information of said first terminal to said management server as taught by the combination of Samsolovic in view of Rao, by using an extended Open Mobile Alliance DM protocol as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 22, the combination of Samsolovic in view of Rao, and further in view of Chatrath discloses the system as in claim 21, wherein said management unit sends the

information of said first terminal to said management server:

with a command of said extend OMA DM protocol which supports active event triggered by clients; or

by extending a standard command of said OMA DM protocol into a terminal information reporting command; or

by adding a special terminal information reporting command into said OMA DM protocol; or

with a command of said OMA DM protocol directly, **(Referring to Fig. 2, Chatrath illustrates a management session message (command) transmitted to a management server at step 209 using the OMA DM protocol, see paragraph [0027] lines 18-22).**

8. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable Samsolovic et. al (US 2005/0102662) in view of Rao (2004/0123282) as applied to claim 23 above, and further in view of Chatrath US (2005/0060361).

Regarding Claim 24, the combination of Samsolovic in view of Rao, discloses the system as in claim 23, wherein said management server maintains said first terminal with said corresponding software update package.

Maintaining, by said management server, first terminal device with said corresponding software update package, **(see Samsolovic, Para [0021] lines 6-15)**

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005]**).

The combination of Samsolovic in view of Rao does not disclose maintaining, by said management server, the first terminal device with said corresponding software update package following an OMA DM process. However the limitation is known in the art of communications.

(Chatrath teaches a terminal is able to communicate terminal information with a server, using an OMA DM process, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to maintain, by a management server, the first terminal with said corresponding software update package as taught by the combination of Samsolovic in view of Rao, following an OMA DM process as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 25, The combination of Samsolovic in view Rao disclose the system as in claim 23, wherein upon receiving the error information of said first terminal, said management server judges whether said first terminal can be maintained automatically, **(Referring to Fig. 2, Samsolovic illustrates client 12 (terminal device) being able to contact the parent server 14 first to determine the latest update information (maintained automatically), see paragraph [0021] lines 6-15).**

if said judgment is "Yes", said management server maintains said first terminal directly **(Referring to Fig. 2, Samsolovic illustrates that any of the servers other than the Parent server 14 can provide update information to the client 12 (device) when needed, see paragraph [0016] lines 3-14)**

Otherwise, said management server sends the error information of said first terminal to said maintenance unit. **(Referring to Fig. 3, Samsolovic illustrates that the updater 32 (Maintenance unit) is not in contact at times with the Central server 34 and is told when an update is needed through a command message sent from the server (contains error information see Fig. 5 XML data), see paragraph [0039]).**

The combination of Samsolovic in view of Rao does not disclose the management server maintaining said first terminal directly following said OMA DM process. However the limitation is well known in the art of communications.

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement the system of claim 23, and determine whether the first terminal can be maintained by the management server or maintenance unit based on a judgment as taught by the combination Samsolovic in view of Rao, by using an OMA DM process as taught by Chatrath, for user convenience and quality of service.

9. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et. al (US 2005/0102662) in view of Rao (2004/0123282) as applied to claim 26 above, and further in view of Chatrath US (2005/0060361).

Regarding Claim 30, the combination of Samsolovic in view of Rao discloses the method as in claim 26, wherein said management unit sends the information of said terminal to said management server, (**see paragraph [0008]**).

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005]**).

The combination of Samsolovic in view of Rao does not expressly disclose wherein management unit sending the information of said terminal to said management server via an extended Open Mobile Alliance DM (OMA DM) protocol. However the limitation is known in the art of communications.

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol DM, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement the system of claim 26 where sending the information of said terminal to said management server as taught by the combination of Samsolovic in view of Rao, by using an extended Open Mobile Alliance DM protocol as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 31, the combination of Samsolovic in view of Rao, and further in view of Chatrath disclose the method as in claim 30, wherein said management unit sends the

information of said terminal to said management server:

with a command of said extend OMA DM protocol which supports active event triggered by clients; or

by extending a standard command of said OMA DM protocol into a terminal information reporting command; or

by adding a special terminal information reporting command into said OMA DM protocol; or

with a command of said OMA DM protocol directly. (Referring to Fig. 2, Chatrath illustrates a management session message (command) transmitted to a management server at step 209 using the OMA DM protocol, **see paragraph [0027] lines 18-22**).

10. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samsolovic et. al (US 2005/0102662) in view of Rao (2004/0123282) as applied to claim 32 above, and further in view of Chatrath US (2005/0060361).

Regarding Claim 33, the combination of Samsolovic in view of Rao discloses the system as in claim 32, wherein said management server maintains said terminal with said corresponding software update package.

Maintaining, by the management server, said terminal device with said corresponding software update package, **(see Samsolovic, Para [0021] lines 6-15)**

(Samsolovic teaches in the background that a system is needed so a device is able to download updated software information in the instance of errors, regardless of location (e.g., return to service center), **See paragraphs [0002-0005]**).

The combination of Samsolovic in view of Rao does not disclose maintaining, by said management server, the first terminal device with said corresponding software update package following an OMA DM process. However the limitation is known in the art of communications.

(Chatrath teaches a terminal is able to communicate terminal information with a server, using an OMA DM process, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to maintain, by a management server, the first terminal with said corresponding software update package as taught by the combination of Samsolovic in view of Rao, following an OMA DM process as taught by Chatrath, for user convenience and quality of service.

Regarding Claim 34, The combination of Samsolovic in view of Rao discloses the method as in claim 32, wherein upon receiving the error information (see Para [0024], Rao) of said first terminal, said management server judges whether said first terminal can be maintained automatically, (Referring to Fig. 2, Samsolovic illustrates client 12 (terminal device) being able to contact the parent server 14 first to determine the latest update information (maintained automatically), see paragraph [0021] lines 6-15).

if said judgment is "Yes", said management server maintains said first terminal directly (Referring to Fig. 2, Samsolovic illustrates that any of the servers other than the Parent server 14 can provide update information to the client 12 (device) when needed, see paragraph [0016] lines 3-14) following said OMA DM process (Chatrath paragraph [0027]);

otherwise, said management server reports the error information of said first terminal to said maintenance unit. (Referring to Fig. 3, Samsolovic illustrates that the updater

32 (Maintenance unit) is not in contact at times with the Central server 34 and is told when an update is needed through a command message sent from the server (contains error information see Fig. 5 XML data in Table 1), see paragraph [0039].

The combination of Samsolovic in view of Rao does not disclose the management server maintaining said first terminal directly following said OMA DM process. However the limitation is well known in the art of communications.

(Chatrath teaches a terminal is able to communicate terminal information with a server, via an extended open mobile alliance protocol, **see Fig. 4 steps 404-407 & paragraph [0027]**).

(Chatrath discloses (e.g., background) that although OMA DM exists for a mobile station, their needs to be an initiation of device management between a user (e.g., terminal) and service provider, **paragraph [0003]**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement the method of claim 32, and determine whether the first terminal can be maintained by the management server or maintenance unit based on a judgment as taught by the combination Samsolovic in view of Rao, by using an OMA DM process as taught by Chatrath, for user convenience and quality of service.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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